

+

PTO/SB/08A (08-00) *mw* 2-10-02

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet	1	of	2
-------	---	----	---

Complete if Known

Application Number	09/638,192
--------------------	------------

Filing Date	August 15, 2000
-------------	-----------------

First Named Inventor	Ivan A. COWIE et al
----------------------	---------------------

Group Art Unit	2631
----------------	------

Examiner Name	Unassigned
---------------	------------

Attorney Docket Number	28549/165559
------------------------	--------------

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
LM	A1	4,928,316		HERITAGE et al.	05/22/90	
EM	A2	6,160,802		BARRETT	12/12/00	
MM	A3	5,610,907		BARRETT.	03/11/97	RECEIVED
GM	A4	3,728,632		ROSS	04/17/73	
GM	A5	5,377,225		DAVIS	12/27/94	
GM	A6	5,793,759		RAKIB et al.	08/11/98	JAN 30 2002
LM	A7	4,170,757		SKUDERA et al.	10/09/79	
MM	A8	4,641,317		FULLERTON	02/03/87	Technology Center 2600
GM	A9	4,743,906		FULLERTON	05/10/88	
MM	A10	4,813,057		FULLERTON	3/14/89	
GM	A11	5,960,031		FULLERTON et al.	09/28/99	
MM	A12	5,963,581		FULLERTON et al..	10/05/99	
GM	A13	4,979,186		FULLERTON	12/18/90	
MM	A14	5,677,927		FULLERTON et al.	10/14/97	
GM	A15	5,687,169		FULLERTON	11/11/97	
GM	A16	5,832,035		FULLERTON	11/03/98	
MM	A17	5,363,108		FULLERTON	11/08/94	

FOREIGN PATENT DOCUMENTS

[illegible]

**Examiner
Signature**

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

VENABLE
ATTORNEYS AT LAW

Please type a plus sign (+) inside this box → +

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 2

Complete if Known

Application Number	09/638,192
Filing Date	August 15, 2000
First Named Inventor	Ivan A. COWIE et al.
Group Art Unit	2631
Examiner Name	Unassigned
Attorney Docket Number	28549/165559

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
GM	A18	S.V. MARIC et al., "A Class of Frequency Hop Codes With Nearly Ideal Characteristics For Use In Multiple-Access Spread-Spectrum Communications And Radar And Sonar Systems", IEEE Transactions on Communications, Vol.40(9):1442-1447, (1992)	
GM	A19	E. L. TITLEBAUM et al., "Time-Frequency Hop Signals Part I: Coding Based Upon The Theory Of Linear Congruences", IEEE Transactions On Aerospace And Electronic Systems", Vol. AES-17(4):490-493, (1981)	
GM	A20	E. L. TITLEBAUM et al., "Time-Frequency Hop Signals Part II: Coding Based Upon Quadratic Congruences", IEEE Transactions On Aerospace And Electronic Systems", Vol. AES-17(4):494-500, (1981)	
GM	A21	E.L. TITLEBAUM et al., "Ambiguity Properties Of Quadratic Congruential Coding", IEEE Transactions On Aerospace And Electronic Systems", Vol. 27(1): 18-29, (1991)	
GM	A22	R.A. SCHOLTZ, "Multiple Access With Time-Hopping Impulse Modulation", Communication Science Institute, University of Southern California, Los Angeles, CA (1993)	
GM	A23	A. ALBICKI et al., "Transmitter And Receiver Design For Pilot Project, Phase 1", Technical Report #1, for Rochester Gas and Electric Corporation, pp.726-742, (1988)	
GM	A24	BELLEGRADA et al., "Time-Frequency Hop Codes Based Upon Extended Quadratic Congruences", IEEE Transactions On Aerospace And Electronic Systems, Vol.24(6):726-742, (1988)	
GM	A25	BELLEGRADA et al., "The Hit Array: An Analysis Formalism For Multiple Access Frequency Hop Coding", IEEE Transactions On Aerospace And Electronic Systems, Vol.27(1):30-39, (1991)	
GM	A26	BELLEGRADA et al., "Amendment to time-Frequency Hop Codes Based Upon Extended Quadratic Congruences", IEEE Transactions On Aerospace And Electronic Systems, Vol.27(1):167-172, (1991)	
GM	A27	DRUMHELLER et al., "Cross-Correlation Properties Of Algebraically Constructed Costas Arrays", IEEE Transactions On Aerospace And Electronic Systems, Vol.27:2-10, (1991)	
GM	A28	KOSTIC et al., "The Design Of New Optical Codes And Time-Hopping Patterns For Synchronous Spread-Spectrum Code Division Multiple-Access Communication Systems", IEEE, ICC, pp. 585-589, (1991)	

Examiner
Signature

Sullivan Mary

Date
Considered

October 7, 2003

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

VENABLE
ATTORNEYS AT LAW